

Amendment Under 37 C.F.R. § 1.111
Serial No. 09/805,184
Our Ref: Q63509

REMARKS

Claims 1-17 are pending in the application. Pursuant to the Restriction Requirement, claims 7-17 have been withdrawn from consideration. Thus, claims 1-6 are the only claims that have been examined in the current Office Action. By way of this Amendment, Applicants have amended claims 1-6.

Applicants hereby affirm the election to prosecute claims 1-6 in the subject application, without traverse.

Claims 1-6 have been rejected under § 112 (second paragraph) as being indefinite. In particular, the Examiner contends that the term “target” is vague and indefinite. As such, the Examiner broadly interprets this term to “define any object within the hollow portions.” *See*, paragraph 5 of the Office Action. Applicants have amended the claims to clarify that the target is detectable for providing information as to the type of the sheet roll cartridge. It is submitted, as amended, that the claims now comply with the specificity requirements of § 112.

Claims 1, 2, 4 and 5 have been rejected under § 102(b) as being unpatentable over Nedstedt (U.S. Patent No. 4,620,184). In addition, these claims have been rejected under § 102(b) as being anticipated by Lammers (U.S. Patent No. 5,984,049). Finally, claims 1-6 has been rejected under § 103 as being unpatentable over Nedstedt in view of Adams, et al. (U.S. Patent No. 4,852,823).

As amended, claim 1 recites that the target is detectable for providing information as to the type of the sheet roll cartridge.

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Beginning first with Nedstedt, this reference discloses providing a field-generating element 11 inside a bobbin for generating a signal when a roll diameter of the web has been reduced so as to inform an operator that the roll replacement is immanent. In the rejection, the Examiner has interpreted the term “target” to define any object within a hollow portion of a roll. Having amended the claims, Applicants submit that the rejection is now improper. This is because claim 1 specifically recites that the target is detectable for providing information as to why the type of the sheet roll cartridge associated with the printing apparatus. As noted above, the field generating element 11 of Nedstedt is used to determined the end of a roll, not to provide any information as to the type of roll being used. Thus, claim 1 patentably distinguishes over this reference.

Turning to the rejection based on Lammers, this reference discloses a roll of web-shaped material with a hollow roll core around which the material is wound. The reference more specifically discloses providing a signal-generating means in the core for generating acoustical signals as the web-shaped material is unwound from the core. For example, the reference discloses that the signal can be an audio or musical signal or the spoken language. See, column 1, lines 63-65.

As can be appreciated from the foregoing, Lammers does not disclose a target which is detectable for providing information as to the type of sheet roll cartridge, as claim 1 requires. Instead, the signal-generating means of Lammers is simply designed to play music, or the like, when the roll is unwound. As such, claim 1 patentably distinguishes over this reference.

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Turning to the § 103 rejection of claim 1, the Examiner contends that it would have been obvious to one of ordinary skill in the art “to add a colored target with an opening formed therein to Nedstedt to provide an identification or discrimination means, for a sheet roll, as taught by Adams, et al. As a preliminary matter, Applicants submit that Adams, et al. is directed to non-analogous art from that of the present invention. In particular, Adams, et al. is directed to a yarn carrier which is clearly a different field of endeavor than a printing apparatus. In addition, Adams, et al. is concerned with providing a means for determining the characteristics of yarn, which is again quite different from the problem addressed by the present invention.

Further, the Examiner’s obviousness determination is completely unsupported by the objective teachings of the prior art. There is absolutely no teaching or suggestion, and hence no motivation in the prior art of modifying the Nedstedt device to include the yarn-retaining insert of Adams, et al., as the Examiner seems to suggest. The sensing arrangement disclosed in that step is purely intended to inform an operator that a roll replacement is imminent. To that end, the reference discloses providing a signal-generating means which generates a signal when the roll is nearly depleted. A person of ordinary skill in the art would not have found it obvious to substitute the insert of Adams, et al. for the signal-generating means of Nedstedt since the resulting device would not include a signal generating means which is the entire focus of Nedstedt. This is a classic example of non-obviousness.

In addition, since the Adams, et al. reference is directed to non-analogous art from that of the present invention and that disclosed in Nedstedt, a person of ordinary skill in the art would

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simply not combine these references. In short, that the Examiner's obviousness determination is based on hindsight, and not the objective teachings of the prior art.

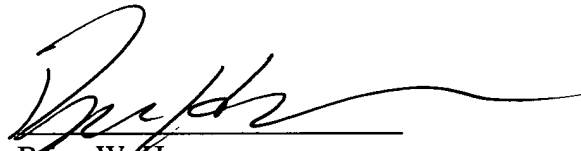
Turning to the dependent claims, they are patentable for the reasons discussed above in regard to claim 1. Furthermore, with respect to claim 5, none of the references teach or suggest a target which is located at one of a plurality of predetermined positions as a means for determining the type of sheet roll, as claim 5 requires. In this respect, it should be noted that even if one were to modify the Nedstedt device in the manner proposed by the Examiner, one would not arrive at the invention recited in claim 5. Thus, claim 5 is allowable over the art.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

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The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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PATENT TRADEMARK OFFICE

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APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

The claims are amended as follows:

Claim 1 (Amended). A printable sheet roll cartridge, comprising:

a sheet rolled in a tubular manner to form a hollow portion therein,; and

a target disposed in the hollow portion, said target being detectable for providing information as to the type of said sheet roll cartridge.

Claim 2 (Amended). The sheet roll cartridge of claim 1, further comprising a core tube disposed in the hollow portion, wherein the sheet is rolled round the core tube, and wherein the target is located in the core tube.

Claim 3 (Amended). The sheet roll cartridge of claim 1, wherein the target is colored.

Claim 4 (Amended). The sheet roll cartridge of claim 1, wherein the target has an opening formed therein.

Claim 5 (Amended). The sheet roll cartridge of claim 1, wherein ~~a position of the target is measured by a target position measuring device~~ the target is located at one of a plurality of predetermined positions, and wherein ~~a~~ the type of the sheet roll cartridge is discriminated by a

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~~discrimination device in accordance with positional information on the target provided by the target position measuring device~~ determining in which of said predetermined positions said target is located.

Claim 6 (Amended). The sheet roll cartridge of claim 1, wherein the target has one of a plurality of predetermined colors ~~a color of the target is measured by a target color measuring device, and wherein a~~ the type of the sheet roll is discriminated by a ~~discrimination device in accordance with color information on the target provided by the target color measuring device~~ determining which of said predetermined colors said target is colored.